

Notice of Allowability

Application No.

10/788,780

Applicant(s)

YAMAMOTO ET AL.

Examiner

Art Unit

Abolfazi Tabatabai

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Drawings

1. The drawings were received on February 27, 2004. These drawings are accepted by the Examiner.

Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to teach or suggest object detection apparatus, distance measuring apparatus and object detection method comprises (a) an image cutting section, wherein the image cutting section cuts an image received by the image pickup device such that the image pickup device receives an image that is divided into a reference plane image and an object image by a predetermined boundary, wherein the reference plane image contains the reference plane, and wherein the object image contains the object and does not contain the reference plane, computing relative positions of the object and the object detection apparatus on the reference plane based on an optical flow obtained from the reference plane image data and an optical flow obtained from the object image data in combination into other features and elements of claims 1 and 15; (b) a movement amount computation section, wherein the movement amount computation section computes an amount of movement of the mobile unit based on an optical flow obtained from the reference plane image; and a distance computation section, wherein the distance computation section computes a distance from the mobile unit to the object based on an optical flow obtained from the object image and the amount of movement of the mobile unit computed by the movement

amount computation section in combination into other features and elements of claim 9.

3. Claims 1-20 are allowed.

Citation of Relevant Prior Art

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lawton (U S 5,109,425) discloses method and apparatus for predicting the direction of movement in machine vision.

Pedersen et al (U S 5,916,168) disclose three-dimensional M-Mode ultrasonic diagnostic imaging system.

Kawada (U S 5,754,677) discloses image-processing apparatus.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to ABOLFAZL TABATABAI whose telephone number is (571) 272-7458.

The Examiner can normally be reached on Monday through Friday from 9:30 a.m. to 7:30 p.m. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Bhavesh Mehta, can be reached at (571) 272-7453. The fax phone number for organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

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applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

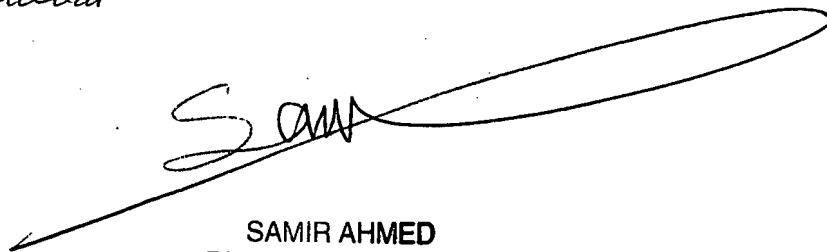
Abolfazl Tabatabai

Patent Examiner

Technology Division 2624

May 21, 2007

A-Tabatabai

A handwritten signature in black ink, appearing to read "SAMIR AHMED", with a long, sweeping horizontal stroke extending to the right.

SAMIR AHMED
PRIMARY EXAMINER